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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/027,945	12/20/2001	Dalsu Lee	14305STUS01U (22171.289)	2615

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HAYNES AND BOONE, LLP
901 MAIN STREET, SUITE 3100
DALLAS, TX 75202

EXAMINER	
CASCHERA, ANTONIO A	

ART UNIT	PAPER NUMBER
2676	12

DATE MAILED: 08/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/027,945	Applicant(s) LEE, DALSU	
	Examiner Antonio A Caschera	Art Unit 2676	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 June 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3 and 6-21* is/are pending in the application.

4a) Of the above claim(s) *13-16* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3 and 17-21* is/are rejected.

7)☒ Claim(s) *6-12* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 December 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. Receipt is acknowledged of a request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e) and a submission, filed on 6/24/04.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-3 and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heeren et al. (U.S. Pub 2003/0041314 A1), Adams et al. (U.S. Patent 6,631,186 B1) and further in view of Wu et al. ("Reflective Java," ANSA Phase III Technical Report. 01/24/1997. http://www.ansa.co.uk/ANSATech/97/Primary/193101.pdf, accessed 07/28/2004).

In reference to claims 1, 17 and 21, Heeren et al. discloses a method of building call flow scripts using a visual programming software (see paragraph 7, lines 1-5). Heeren et al. discloses importing a call flow program chart into the visual programming software which has a graphical user interface consisting of draggable/droppable items to use in the program (see paragraph 26, lines 1-11 and #20 and 21 of Figure 2). Note, the office interprets the call flow program chart equivalent to the software object of applicant's claim as the program chart of Heeren et al. provides flow and structure for executing telephone call services. Heeren et al. discloses

displaying the program using icons which represent objects of the program having properties such as process rules, control functions and queries, to name a few (see paragraph 27 and #20 of Figure 2). Heeren et al. also discloses generating a call flow program script, representative of the objects in the call flow program chart which are positioned relative to each other to define program flow as the name of the chart is a "call flow program chart" (see paragraph 28, #20 and 21 of Figure 2). Heeren et al. discloses converting the visual programmed script data to data formatted for a presentation program which involves saving the script (see paragraph 55, lines 1-3 and paragraph 56, last 6 lines). Note, the office interprets Heeren et al. to inherently save the scripts to some sort of memory which the office interprets as functionally equivalent to a script repository. Heeren et al. also discloses the system used in an IVR system where a request to route a call is received and the system processes the request based on the stored visual program script (see paragraph 57). Heeren et al. also discloses the system applicable to call center systems (see paragraph 58). Note, since the system of Heeren et al. automatically uses the stored visual program script when a call needs to be routed in an IVR application, the office interprets that Heeren et al. inherently discloses retrieving the script from memory in response to a request. Heeren et al. does not explicitly disclose executing the script using a virtual machine however Adams et al. does. Adams et al. discloses a method of implementing a call forwarding service using a virtual machine implemented software method (see column 7, lines 10-11 and column 41, lines 19-23). It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the visual programming call program flow generation techniques of Heeren et al. with the virtual machine processing of Adams et al. in order to execute call forwarding service software methods running on computer processor or processors

(see column 41, lines 12-15 of Adams et al.). Adams et al. does not explicitly disclose the virtual machine using reflection however Wu et al. does. Wu et al. discloses using a virtual machine running the JAVA programming language with reflection (see abstract and slide #4 of Wu et al.). It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the visual programming call program flow generation techniques of Heeren et al. and the virtual machine processing of Adams et al. with the virtual machine with reflection of Wu et al. in order to produce a flexible program which is easy to upgrade in order to adapt to user and/or hardware changes (see slide #8 of Wu et al.). In reference to claim 17, Heeren et al. discloses a system implementing the above methods comprising a call center computer (see #12 of Figure 1) which is further connected to user workstations and a telephone network (see paragraph 21 and Figure 1). The office interprets such a computer functionally equivalent to the application server of applicant's claim. Further note, the office interprets Heeren et al. to inherently select a software application to process a request because the IVR uses the virtual programming script to route calls made by users (see paragraph 57, last 3 lines).

In reference to claims 2 and 3, Heeren et al., Adams et al. and Wu et al. disclose all of the claim limitations as applied to claim 1 above, in addition Heeren et al. discloses the scripts being eventually converted to the XML or HTML languages (see paragraph 46, lines 1-6).

In reference to claim 18, claim 18 is equivalent in scope to the combination of claims 1, 2 and 3 and therefore is rejected under similar rationale. Further, Heeren et al. discloses a computer system enabled to perform the above visual programming methods which the office interprets, the computer, as inherently comprising a computer-readable medium with computer-executable instructions for performing the above methods. Even further, Wu et al. discloses

using a virtual machine programmed in JAVA which is known to be an object oriented programming language.

In reference to claim 19, Heeren et al., Adams et al. and Wu et al. disclose all of the claim limitations as applied to claim 18 above. Heeren et al. discloses the IVR system routing calls based on the visual programming script (see paragraph 57) which the office interprets as executing the script since the script contains rules to properly route the calls (see paragraph 27). Heeren et al. discloses a system implementing the above methods comprising a call center computer (see #12 of Figure 1) which is further connected to user workstations and a telephone network (see paragraph 21 and Figure 1). The office interprets such a computer functionally equivalent to the application server of applicant's claim.

In reference to claim 20, Heeren et al., Adams et al. and Wu et al. disclose all of the claim limitations as applied to claim 19 above. Adams et al. discloses a method of implementing a call forwarding service using a virtual machine implemented software method (see column 7, lines 10-11 and column 41, lines 19-23). Wu et al. discloses using a virtual machine running the JAVA programming language with reflection (see abstract and slide #4 of Wu et al.). It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the visual programming call program flow generation techniques of Heeren et al. and the virtual machine processing of Adams et al. with the virtual machine with reflection of Wu et al. in order to produce a flexible program which is easy to upgrade in order to adapt to user and/or hardware changes (see slide #8 of Wu et al.).

3. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Heeren et al. (U.S. Pub 2003/0041314 A1), Adams et al. (U.S. Patent 6,631,186 B1), Wu et al. ("Reflective

Java," ANSA Phase III Technical Report. 01/24/1997.

http://www.ansa.co.uk/ANSATech/97/Primary/193101.pdf, accessed 07/28/2004) and further in view of Shaw et al. (U.S. Patent 6,362,836 B1).

In reference to claim 21, claim 21 is equivalent in scope to claims 1 and 17 above and therefore is rejected under similar rationale. Further, Heeren et al. further discloses the system and methods applicable to an email system in a computer network marketing or customer service center environment (see paragraph 21, last 5 lines). Neither, Heeren et al., Adams et al., nor Wu et al. explicitly disclose suspending operating threads of the script however Shaw et al. does. Shaw et al. discloses a universal application server connected in a client server environment (see column 4, lines 5-11 and 32-34). Shaw et al. discloses the universal application server configured to suspend the instance of an application running and initiated by a user (see column 14, lines 32-39 of Shaw et al.). It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the visual programming call program flow generation techniques of Heeren et al., the virtual machine processing of Adams et al. and the virtual machine with reflection of Wu et al. with the application server capabilities of Shaw et al. in order to create a more efficient distributed processing system, balancing and managing loads and sessions in a client server network environment (see columns 3-4, lines 66-3 of Shaw et al.) releasing unused resources.

Response to Arguments

4. The cancellation of claims 13-16 is noted.

5. Applicant's arguments, see pages 6 and 8 of Applicant's Remarks, filed 6/24/04, with respect to the rejection(s)of claim(s) 1-3, 17-21 under 35 U.S.C. 103(a) in view of Fiszman et al. have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Heeren et al. (U.S. Pub 2003/0041314 A1), Adams et al. (U.S. Patent 6,631,186 B1), Wu et al. ("Reflective Java," ANSA Phase III Technical Report. 01/24/1997. http://www.ansa.co.uk/ANSATech/97/Primary/193101.pdf, accessed 07/28/2004) and Shaw et al. (U.S. Patent 6,362,836 B1).

6. Applicant's arguments filed 6/24/2004 have been fully considered but they are not persuasive.

In reference to claim 17, the applicant argues that Heeren et al. does not teach, "retrieving a script from a script repository, such that the script represents an operational flow for an automated call distribution system," (see page 9 2nd paragraph of Applicant's Remarks). As stated above, Heeren et al. discloses the IVR system responding to a request to route a call by using the visual programming script to route the call (see paragraph 57) and even further, Heeren et al. discloses storing the converted script (see paragraph 56, last 6 lines). Because Heeren et al. saves the scripts, the scripts must inherently be stored in some sort of memory and further since the call system uses the visual programming script to route incoming calls, the office interprets Heeren et al. to inherently disclose retrieving the script from memory, the script representing operational flow for a call distribution system.

In reference to claim 18, the applicant argues that Heeren et al. does not explicitly disclose, "importing a software object for providing functionality for an automated call

distribution center," since the actual functionality of the telephone connections is stored in the physical circuitry, teaching away from, "a software object for providing functionality for an automated call distribution center," (see page 8, 1st paragraph of Applicant's Remarks). The office disagrees as Heeren et al. explicitly discloses the visual program allowing for a user to generate a script call flow (see paragraph 27, lines 1-2). Such a "flow" is considered functionally equivalent to the functionality or role of the system, which is even further disclosed as a call center system by Heeren et al. (see paragraph 58). Further, the visual programming of Heeren et al. allows the user to import objects into the call flow script which may represent, "...a process, text, rule, query, control function, other call flow activity or combinations thereof," (see paragraph 27, lines 6-7). Such representations clearly provide functionality for a call distribution center therefore, the office maintains the application of the Heeren et al. reference.

Allowable Subject Matter

7. Claims 6-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

In reference to claim 6, the prior art of record (Heeren et al. (U.S. Pub 2003/0041314 A1), Adams et al. (U.S. Patent 6,631,186 B1) and Wu et al. ("Reflective Java," ANSA Phase III Technical Report. 01/24/1997. http://www.ansa.co.uk/ANSATech/97/Primary/193101.pdf, accessed 07/28/2004)) does not explicitly disclose an import module for importing a software object after receiving a request from an application platform, the object providing functionality for the application platform in combination with the further limitations of claim 6.

In reference to claims 7-12, claims 7-12 are dependent upon objected to claim 6 and therefore are also objected to.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Antonio Caschera whose telephone number is (703) 305-1391. The examiner can normally be reached Monday-Thursday and alternate Fridays between 7:00 AM and 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella, can be reached at (703)-308-6829.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

aac

7/28/04

MATTHEW C. BELLA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600